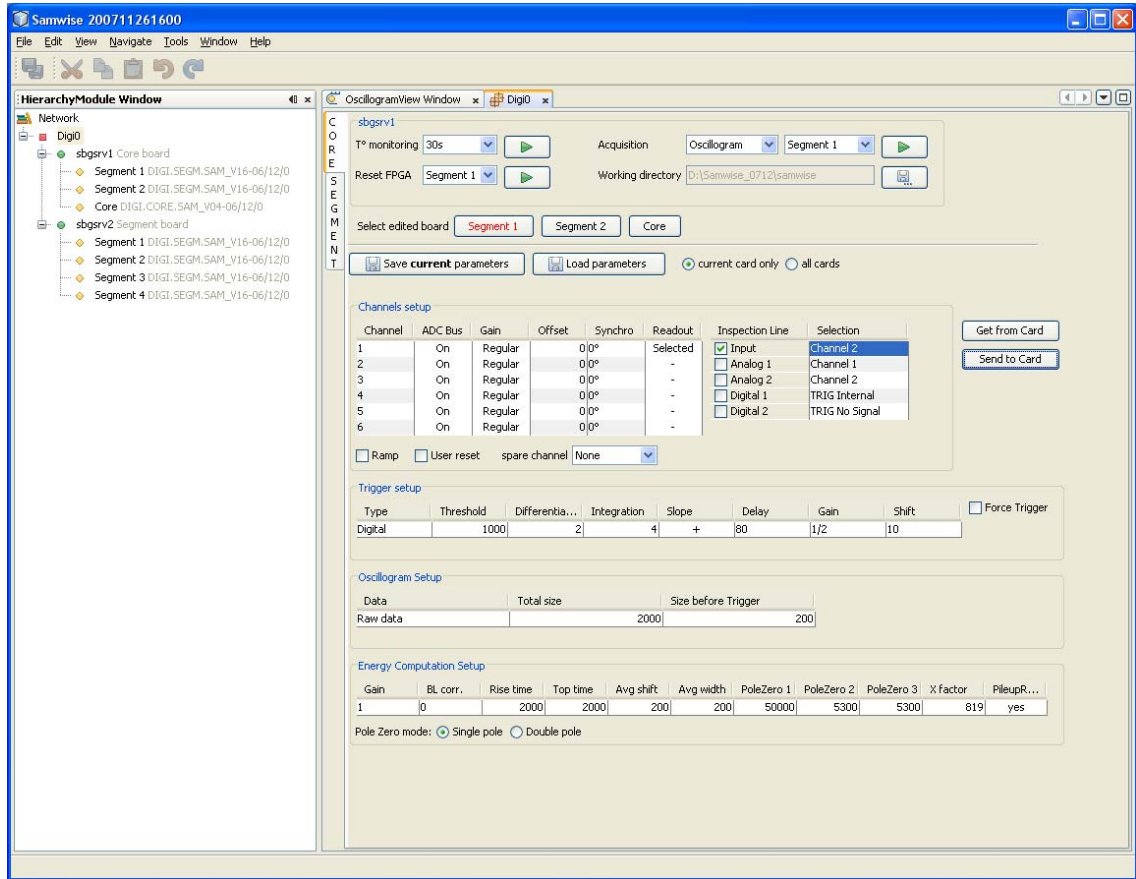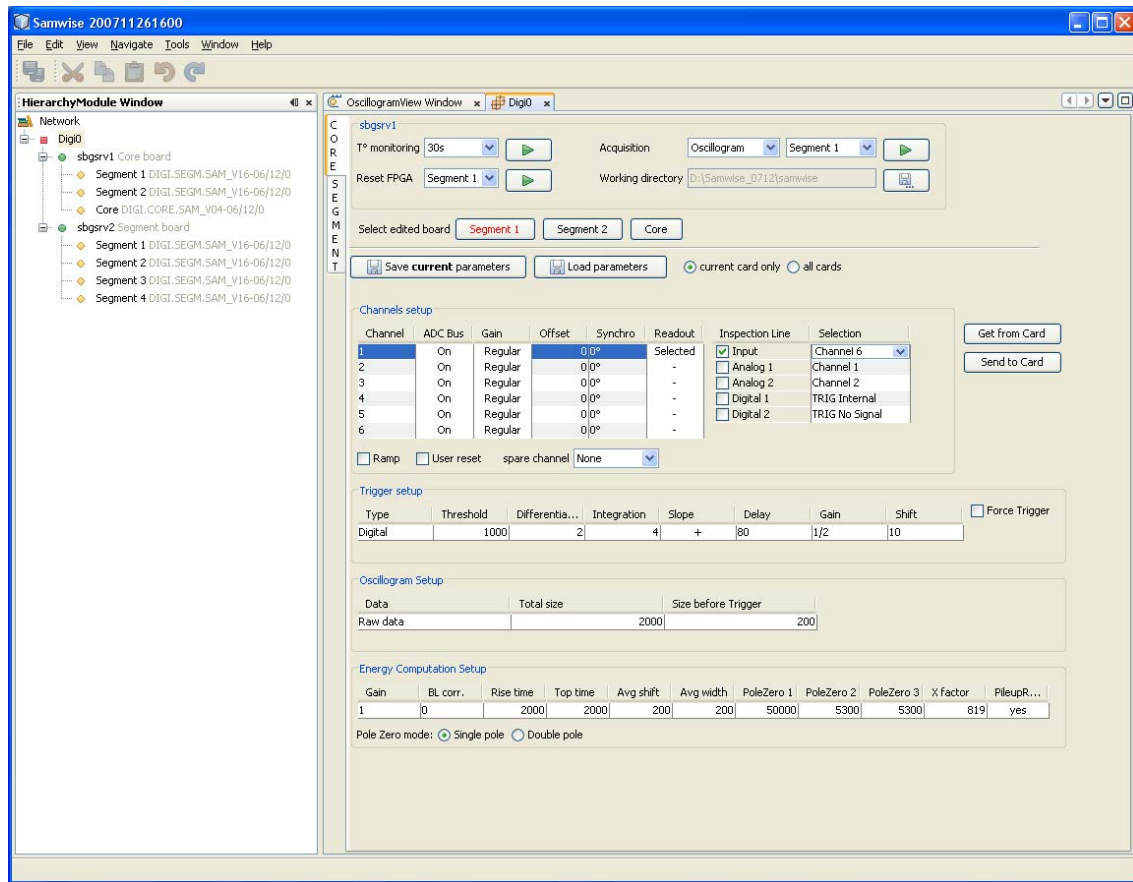Analogue Inspection Line and oscillogram test

1. Use Agata Test board to inject dummy sine wave signals to the Digitiser

2. Choose a 1MHz, 1V pk-pk sine wave (0.5V pk-pk for core card Agata test Board) as the input to the Agata Test board, 50R load terminated.

3. Right click on Dig0 and select refresh all.

4. Select the card for testing, connect the input cable to the card and the analogue inspection line output to an oscilloscope.

5. Verify that a sine wave is seen on scope.

6. Select channel 2 (as shown below) and click "send to Card". The sine should increase in amplitude (see table below).

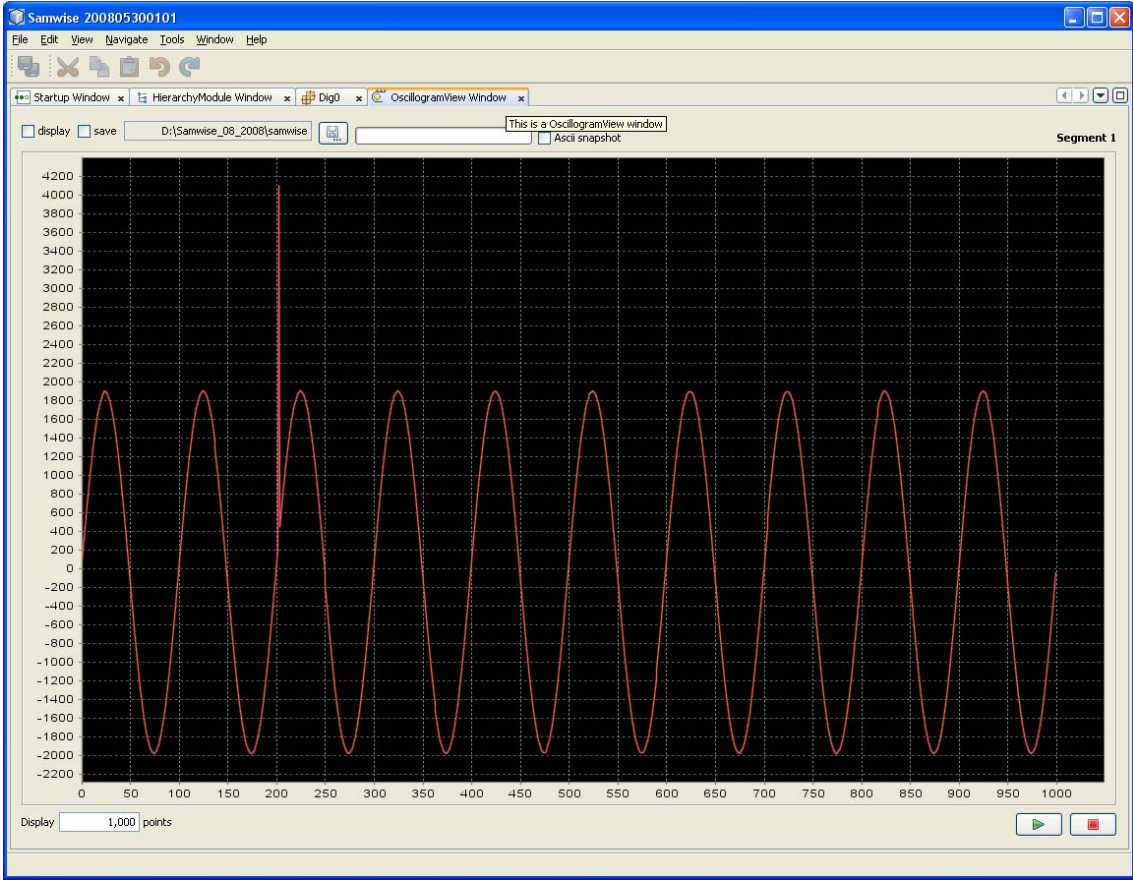| Channel (segment)	Sine wave amplitude (V), (as seen on Inspection line, front Panel)
1	0.144
2	0.224
3	0.304
4	0.376
5	0.456
6	0.536
Channel (core)	Sine wave amplitude (V), (as seen on Inspection line, front Panel)
1	0.685
2	NA

7. Repeat that for all 6 channels. If there is no sine wave for a particular channel, then check the input connector for loose contact.

Samwise 200711261600

File Edit View Navigate Tools Window Help

HierarchyModule Window
- Network
- Digi0
  - sbgsrv1 Core board
    - Segment 1 DIGI.SEGM.SAM_V16-06/12/0
    - Segment 2 DIGI.SEGM.SAM_V16-06/12/0
    - Core DIGI.CORE.SAM_V04-06/12/0
  - sbgsrv2 Segment board
    - Segment 1 DIGI.SEGM.SAM_V16-06/12/0
    - Segment 2 DIGI.SEGM.SAM_V16-06/12/0
    - Segment 3 DIGI.SEGM.SAM_V16-06/12/0
    - Segment 4 DIGI.SEGM.SAM_V16-06/12/0

OscillogramView Window   Digi0

CORE SEGMENT

sbgsrv1

T° monitoring 30s   Acquisition Oscillogram   Segment 1
Reset FPGA Segment 1   Working directory D:\Samwise_0712\samwise

Select edited board Segment 1   Segment 2   Core

Save **current** parameters   Load parameters   ● current card only ○ all cards

Channels setup

Channel	ADC Bus	Gain	Offset	Synchro	Readout	Inspection Line	Selection
1	On	Regular	0	0°	Selected	☑ Input	Channel 2
2	On	Regular	0	0°	-	☐ Analog 1	Channel 1
3	On	Regular	0	0°	-	☐ Analog 2	Channel 2
4	On	Regular	0	0°	-	☐ Digital 1	TRIG Internal
5	On	Regular	0	0°	-	☐ Digital 2	TRIG No Signal
6	On	Regular	0	0°	-		

☐ Ramp   ☐ User reset   spare channel None

Get from Card
Send to Card

Trigger setup

Type	Threshold	Differentia...	Integration	Slope	Delay	Gain	Shift	
Digital	1000	2	4	+	80	1/2	10	☐ Force Trigger

Oscillogram Setup

Data	Total size	Size before Trigger
Raw data	2000	200

Energy Computation Setup

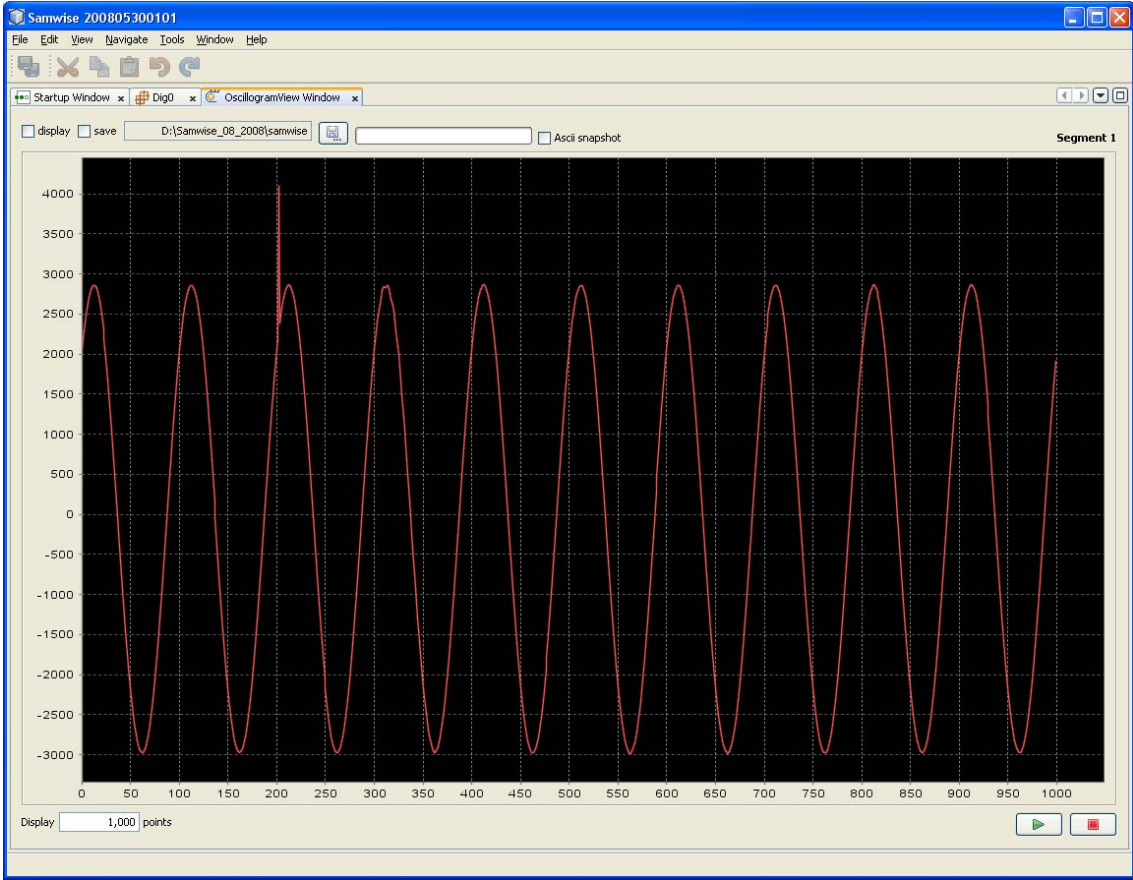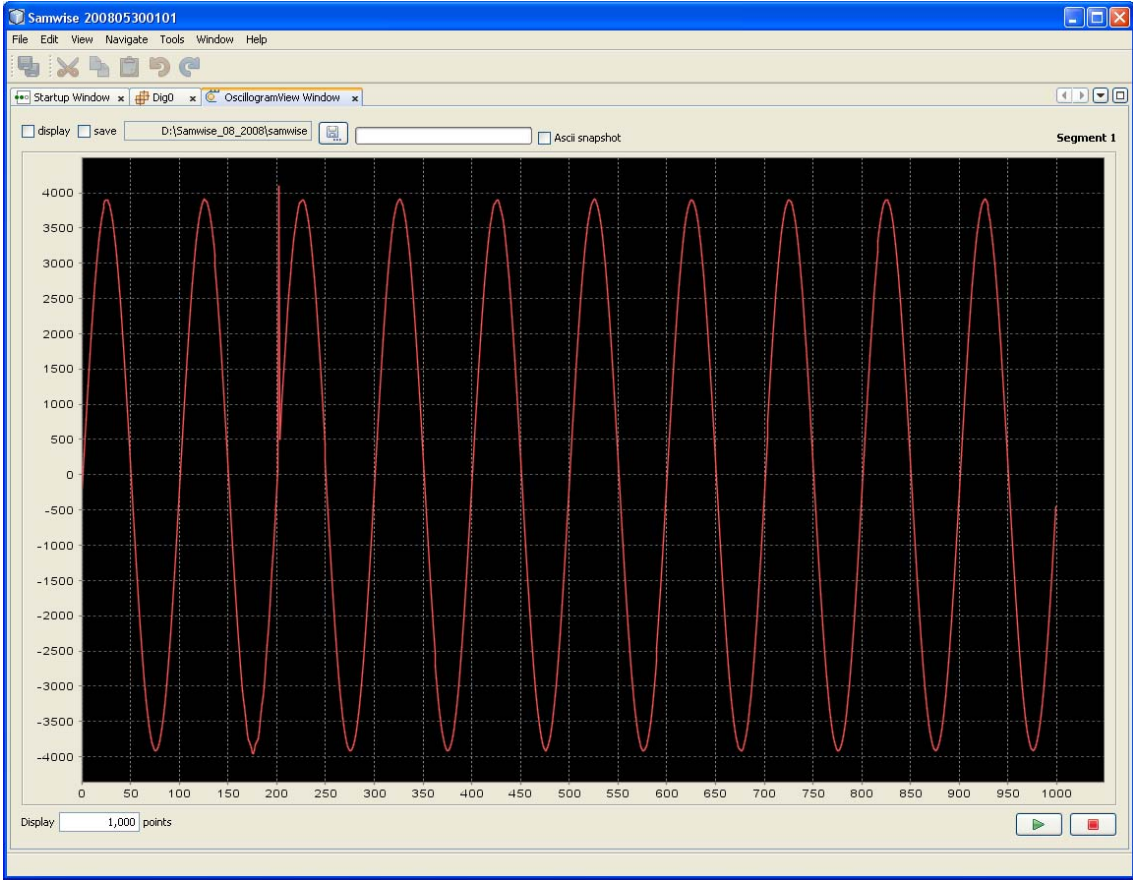| Gain	BL corr.	Rise time	Top time	Avg shift	Avg width	PoleZero 1	PoleZero 2	PoleZero 3	X factor	PileupR...
1	0	2000	2000	200	200	50000	5300	5300	819	yes

Pole Zero mode: ● Single pole ○ Double pole

The next test is to view the sine wave of each channel in samwise. Select channel 1 as highlight below and then click on the green play icon at the top right to acquire the data for that channel:
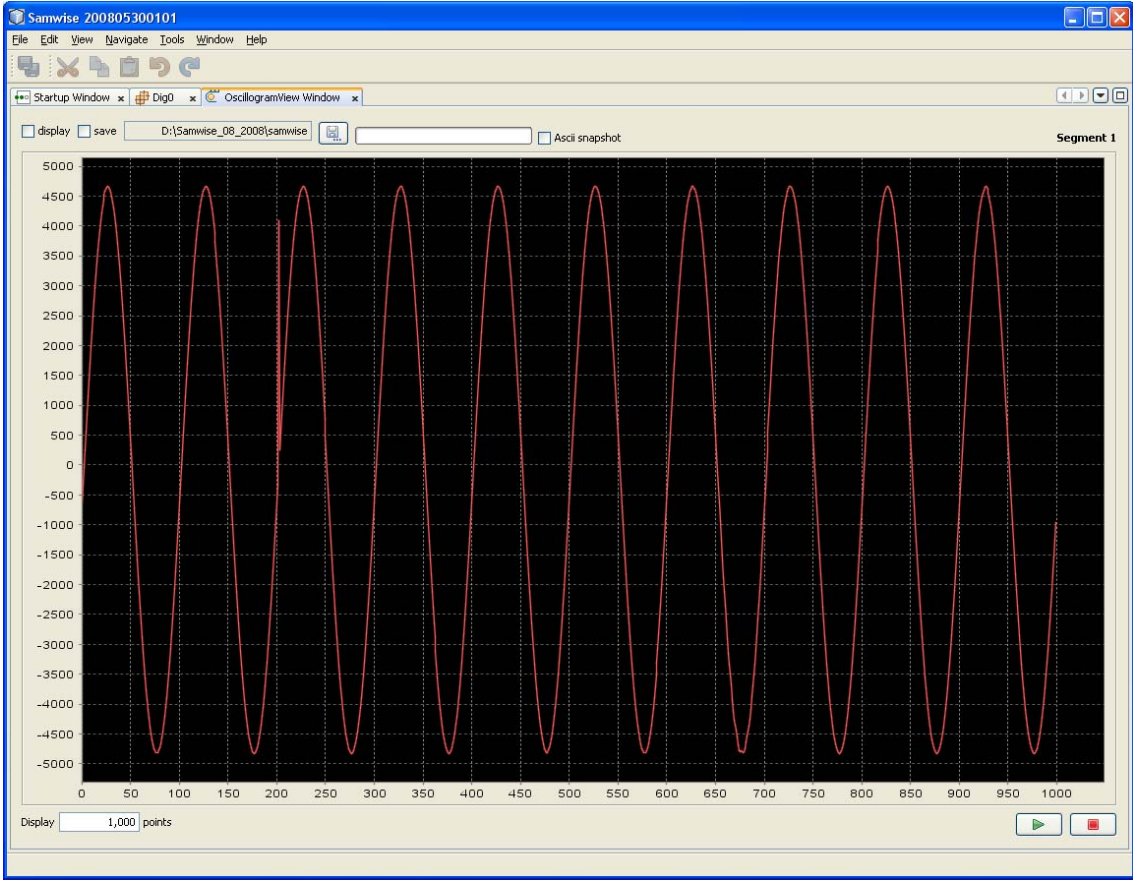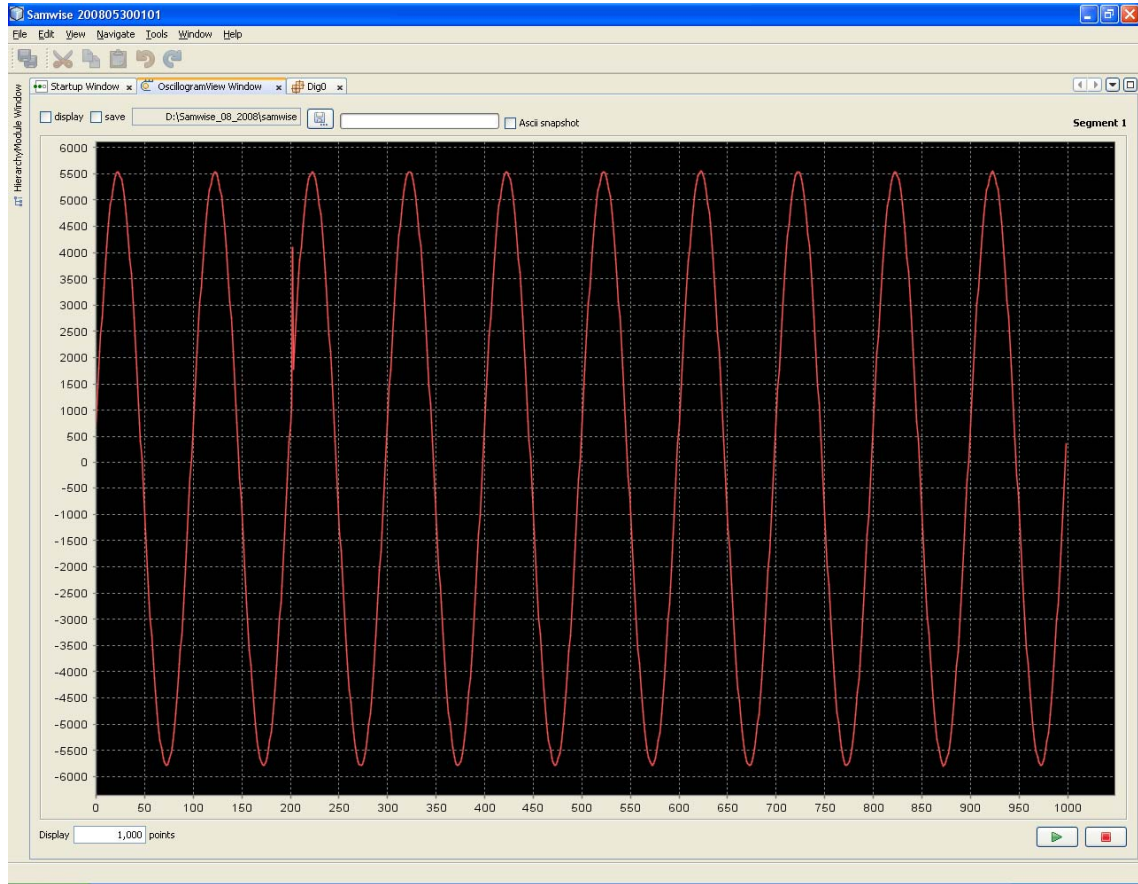
If successful you should see a sine wave. Stop acquition, select channel 2 and enable acquition. Repeat for all 6 channels (see snapshots below).
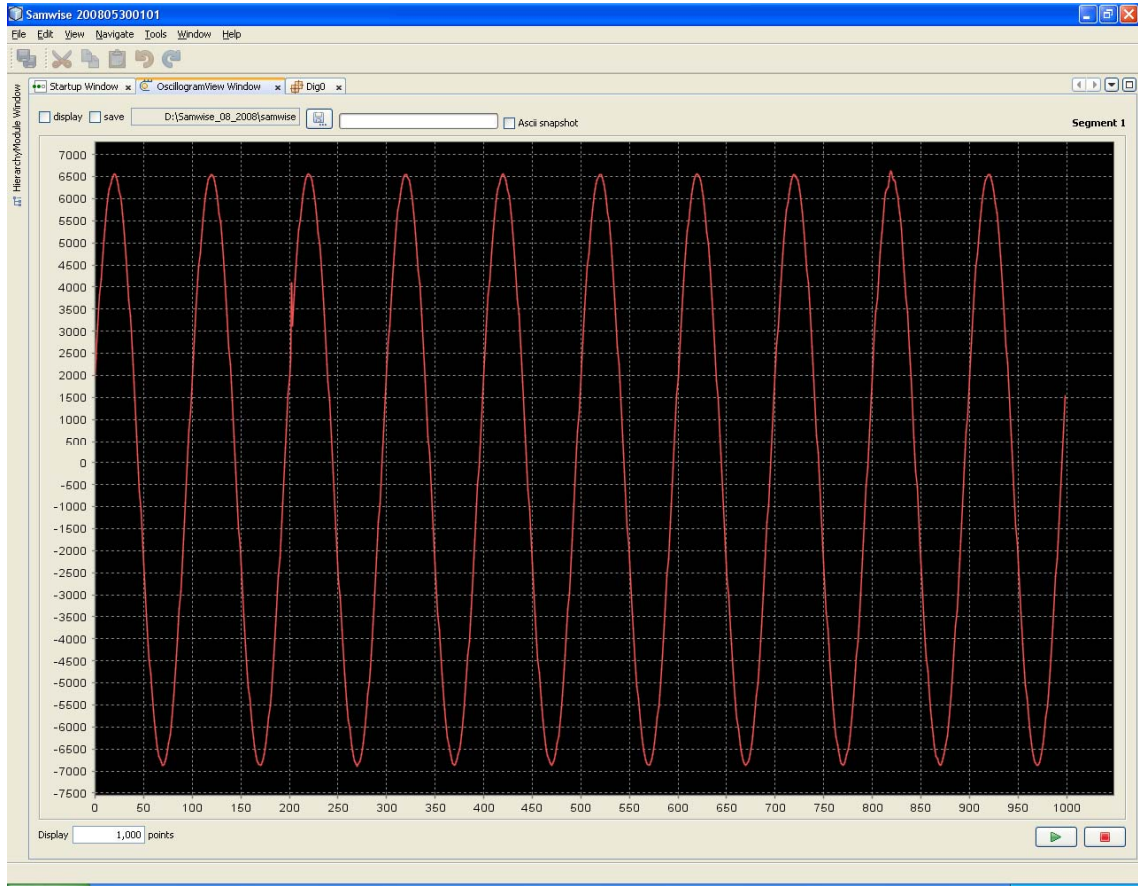
Samwise 200805300101

File　Edit　View　Navigate　Tools　Window　Help

Startup Window　×　HierarchyModule Window　×　Dig0　×　OscillogramView Window　×

☐ display　☐ save　　D:\Samwise_08_2008\samwise　　This is a OscillogramView window　☐ Ascii snapshot　　**Segment 1**

```
4200
4000
3800
3600
3400
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
 800
 600
 400
 200
   0
-200
-400
-600
-800
-1000
-1200
-1400
-1600
-1800
-2000
-2200
    0   50  100  150  200  250  300  350  400  450  500  550  600  650  700  750  800  850  900  950 1000
```

Display　1,000　points

Core channels 1 and 2